CLAIMS:

What is claimed is:

1 1.   A method comprising:

2   identifying a processing capability of a remote device; and

3   slowing an effective data rate within an Ethernet communication channel by selectively

4 interjecting control elements between successive frames of substantive content associated with a

5 communication session between a communication interface and a remote device.

2 2.   A method according to claim 1, wherein identifying the processing capability of the

remote device comprises:

    sending a capability request; and

    receiving a response to the request denoting at least the processing capability of the

remote device.

1 3.   A method according to claim 1, wherein identifying the processing capability of the

2 remote device comprises:

3   receiving an indication from the remote device denoting at least the processing capability

4 of the remote device.

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1 4.   A method according to claim 3, wherein the indication also denotes a communication

2 capability of the remote device.

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1 5.   A method according to claim 4, further comprising:

2 establishing a virtual channel within the Ethernet channel, the virtual channel having a

3 reduced data rate than the physical Ethernet channel selected in accordance with the identified

4 communications capability of the remote device.

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1 6.   A method according to claim 5, wherein dynamically generating the virtual channel

2 within a physical Ethernet channel comprises establishing a sub-10Gb/S virtual data channel

3 within a physical 10Gb/S data channel based, at least in part, on the identified communication

4 capability of the remote device.

7.   A method according to claim 1, wherein at least the processing capability of the remote

device is obtained by the communication interface through auto-negotiation.

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7 8.   A method according to claim 7, wherein slowing the effective data rate of the

communication channel comprises:

3   computing a ratio of processing capability of the remote device to a data rate of the

4 communication channel; and

5   selectively inserting a number of frames of idle control elements between successive

6 frames of substantive content associated with the communication session based, at least in part,

7 on the computed ratio.

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1 9.   A method according to claim 8, wherein the number of frames inserted reduces a rate at

2 which substantive frames are received by the remote computing device to a level commensurate

3 with the processing capability of the remote device.

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1 10. An apparatus comprising:

2   control logic, to identify a processing capability of a remote network device; and

3   a media access controller (MAC), responsive to the control logic, to selectively reduce an

4 effective data rate of a communication channel based, at least in part, on the identified

5 processing capability of the remote network device.

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1 11. An apparatus according to claim 10, wherein the control logic sends a capability request

2 to the remote device and receives a response to the request denoting at least the processing

3 capability of the remote device.

4 12. An apparatus according to claim 10, wherein the control logic receives a broadcast

5 indication from the remote device denoting at least the processing capability of the remote

6 device.

1 13. An apparatus according to claim 10, wherein the MAC is an 802.3ae compliant MAC

2 enhanced to selectively reduce the effective data rate of the communication channel based, at

3 least in part, on the identified processing capability of the remote network device.

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1 14. An apparatus according to claim 10, wherein the MAC selectively inserts a number of

2 frames comprising idle control elements between successive frames of substantive content

3 associated with the communication session between the apparatus and the remote device to

4 reduce the effective data rate of the communication channel.

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15.   An apparatus according to claim 14, wherein the MAC computes a ratio of the processing capability to the data rate of the physical communication channel to determine the number of frames comprising idle control elements.

16.   A storage medium comprising content which, when executed by an accessing computing device, causes the device to implement a scalable network interface to identify a processing capability of a remote network device, and to selectively reduce an effective data rate of a communication channel between the accessing computing device and the remote network device based, at least in part, on the processing capability of the remote network device.

17.   A storage medium according to claim 16, wherein the scalable network interface reduces the effective data rate of the communication channel by interjecting a number of frames comprising idle control elements between successive frames of substantive content associated with a communication session between the accessing computing device and the remote network device.

18.   A storage medium according to claim 17, wherein the scalable network interface computes the number of frames of idle control elements from a ratio of the identified processing capability of the remote network device to a data rate of the communication channel.